CDP-XE700

SERVICE MANUAL

AEP Model
UK Model

PHOTO : AEP model

Model Name Using Similar Mechanism	CDP-XE800
CD Mechanism Type	CDM36-14
Base Unit Type	BU-14
Optical Pick-up Type	KSS-213B/S-N

SPECIFICATIONS

Compact disc player

Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max 44.6 µW* * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up block with 7 mm aperture.
Frequency response	2 Hz to 20 kHz ± 0.5 dB
Signal-to-noise ratio	More than 102 dB
Dynamic range	More the 98 dB
Harmonic distortion	Less than 0.0035%
Channel separation	More than 100 dB

Outputs

	Jack type	Maximum output level	Load impedance
LINE OUT	Phono jacks	2 V (at 50 kilohms)	Over 50 kilohms
DIGITAL OUT (OPTICAL)	Optical output connector	–18 dBm	Wave length : 660 nm
PHONES	Stereo phone jack	10 mW	32 ohms

General

Power requirements	220 V – 230 V AC, 50/60 Hz
Power consumption	12W
Dimensions (approx.) (w/h/d)	430 × 1107 × 295 mm (17 × 4 1/4 × 11 5/8 in.) incl. projecting parts
Mass (approx.)	3.6 kg (7 lbs 15 oz)

Supplied accessories

Audio cord (2 phono plugs–2 phono plugs) (1)
Remote commander (RM-D820) (1)
Sony SUM-3 (NS) batteries (2)

Design and specifications are subject to change without notice.

MICROFILM

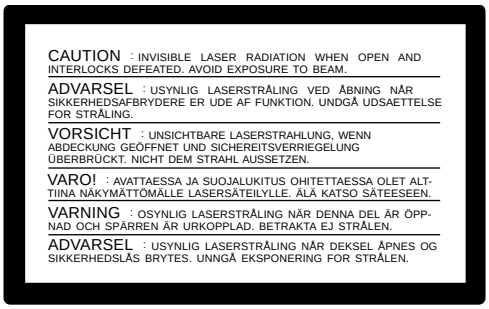
COMPACT DISC PLAYER

SONY®

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

The laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.


CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLIG LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVARSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.

This caution label is located inside the unit.

Notes on chip component replacement
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing
- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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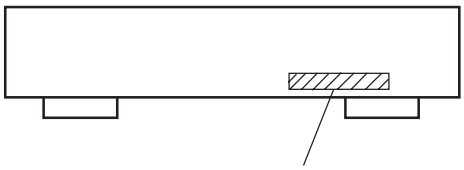
MODEL IDENTIFICATION
— BACK PANEL —

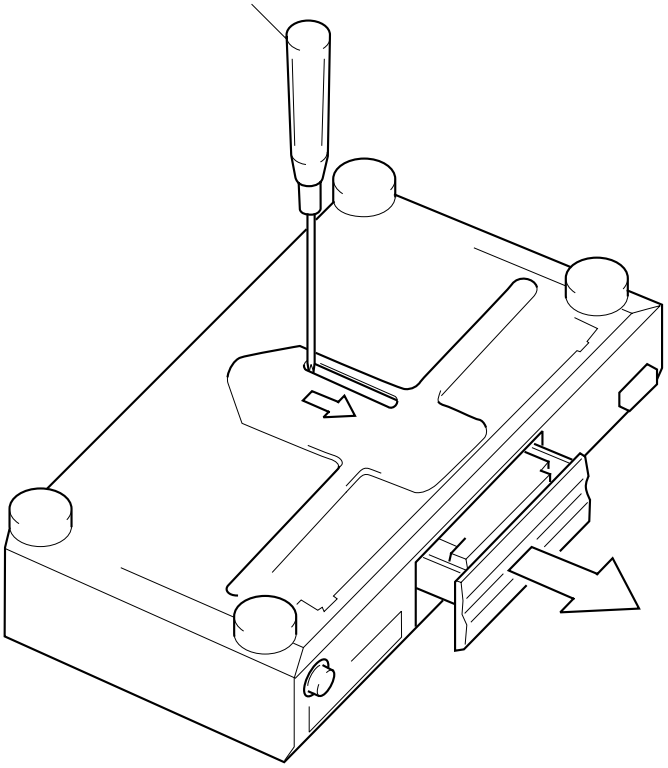


4-978-904-1☐: AEP, German model
4-979-904-8☐: UK model

SECTION 1
SERVICING NOTE

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF

Insert a screwdriver into the aperture of the unit bottom, and move it in the direction of arrow.



NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

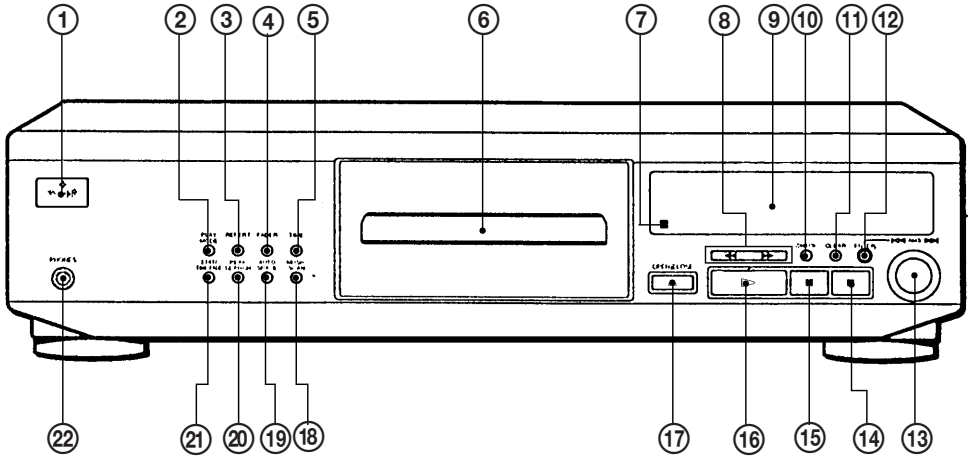
LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the “S curve check” in “CD section adjustment” and check that the S curve waveform is output three times.

SECTION 2
GENERAL

LOCATION OF PARTS AND CONTROLS

Front Panel



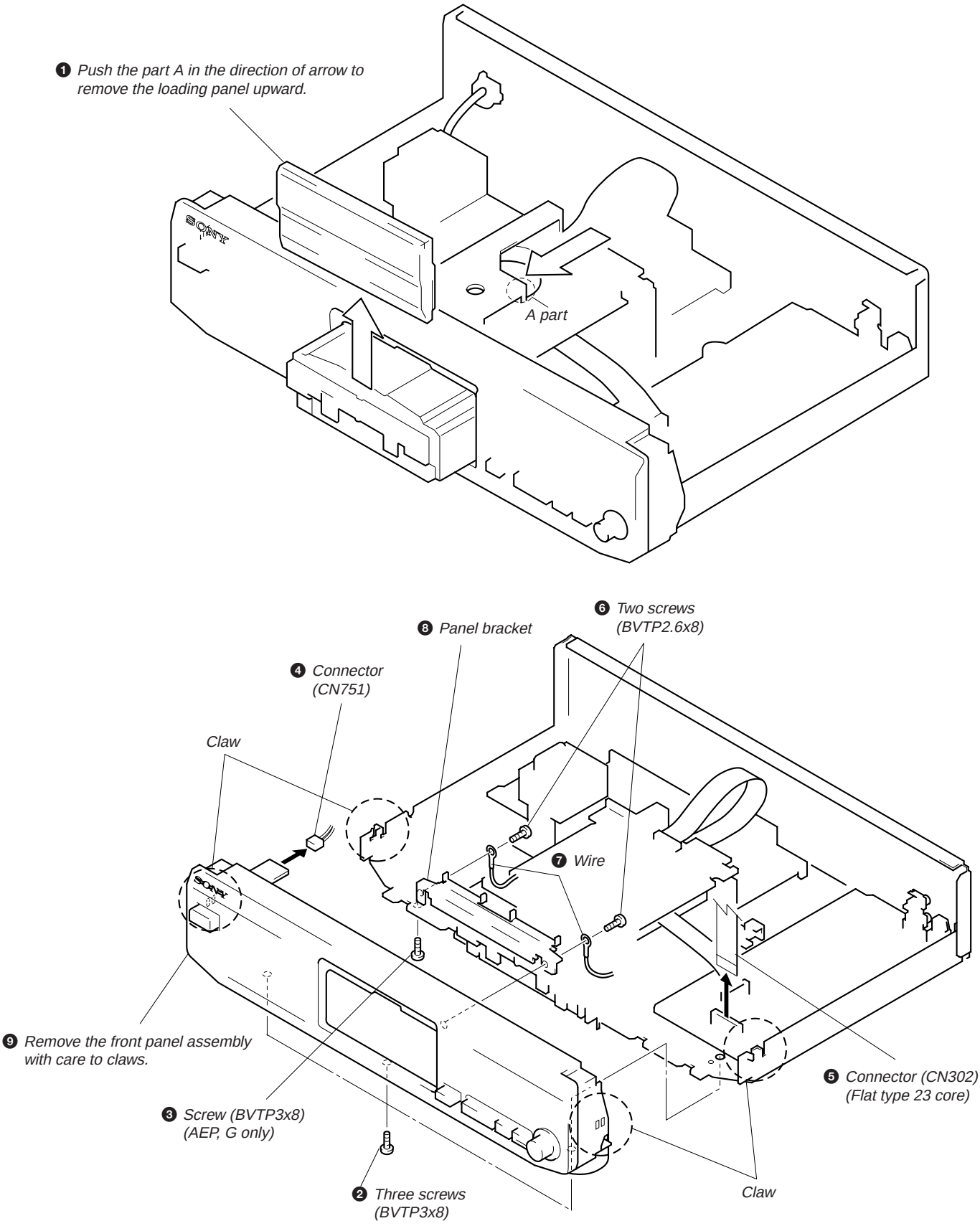
① POWER switch
② PLAY MODE button
③ REPEAT button
④ FADER button
⑤ TIME button
⑥ Disc tray
⑦ Remote sensor
⑧ ◀◀/▶▶ buttons
⑨ Display window
⑩ CHECK button
⑪ CLEAR button
⑫ ENTER button
⑬ ⏮ AMS* ⏭ knob
⑭ ■ (stop) button
⑮ ❚❚ (pause) button
⑯ ▷ (play) button
⑰ ⏏ OPEN/CLOSE button
⑱ MUSIC SCAN button
⑲ AUTO SPACE button
⑳ PEAK SEARCH button
㉑ EDIT/TIME FADE button
㉒ PHONES jack (EXCEPT UK)

* AMS is the abbreviation for Automatic Music Sensor.

SECTION 3
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

3-1. FRONT PANEL ASSEMBLY


❶ Push the part A in the direction of arrow to remove the loading panel upward.
A part
❻ Two screws (BVTP2.6x8)
❽ Panel bracket
❹ Connector (CN751)
Claw
❼ Wire
❾ Remove the front panel assembly with care to claws.
❺ Connector (CN302) (Flat type 23 core)
❸ Screw (BVTP3x8) (AEP, G only)
❷ Three screws (BVTP3x8)
Claw

SECTION 4
TEST MODE

4-1. AF MODE

The following checks can be performed in the AF mode, which is set by connecting the TP2 (AFADJ) terminal on MAIN board to the Ground and turning on the power.

- **FL tube check**

  After all segments light up, when the ▷ button is pressed, the following will be displayed. (Partial lighting 1)

(Partial lighting 1)

When the ■ button is pressed, the following will be displayed. (partial lighting 2)

	2		4	
6		8		10
	12		14	
16		18		20

(Partial lighting 2)

When the OPEN/CLOSE ⏏ button is pressed, all will light up again.

- **Key check**

  All buttons have corresponding button numbers. When a button is pressed, the counter will count up and display the button's number. However, the counter will only count to "17". It will not count for buttons already pressed once, but will display the button's number.

Display of counting *Display of button number*

Button	Button No. Displayed	Button	Button No. Displayed
TIME	00	ENTER	32
FADER	01	CLEAR	33
REPEAT	02	CHECK	34
PLAY MODE	03	▶▶	35
EDIT/ TIME FADE	04	◀◀	36
		OPEN/ CLOSE ⏏	All lit
PEAK SEARCH	05		
AUTO SPACE	06	PLAY ▷	Partial lighting 1
MUSIC SCAN	07	STOP ■	Partial lighting 2
❚❚	25		

- **Remote commander check**

  When the ▷ button of the remote commander is pressed, the "▷" lights up. All go off when the other buttons are pressed.

- **Audio check**
  - Initial setting of digital filter and release of mute.
  - When the TP2 (AFADJ) terminal on MAIN board is set to HIGH (VDD), emphasis turns on. When set to LOW (Ground), it turns off.

4-2. ADJ MODE

The following operations are performed in the ADJ mode, which is set by connecting the TP1 (ADJ) terminal to the Ground and turning on the power.

- During playback, there is no problem even if the GFS is continuously LOW.
- High speed search is prohibited during access.
- During playback, the gain of focus servo and spindle servo does not decrease.
- Servo related manual operations and measurement can be performed.
  (For details of operations, refer to Table of Key Operrations in ADJ Mode.)

4-3. CLV-S MODE

The spindle servo for playback sets into the CLV-S mode when the TP1 (ADJ) terminal is connected to Ground after turning on the power.

TABLE OF BUTTON OPERATIONS IN ADJ MODE

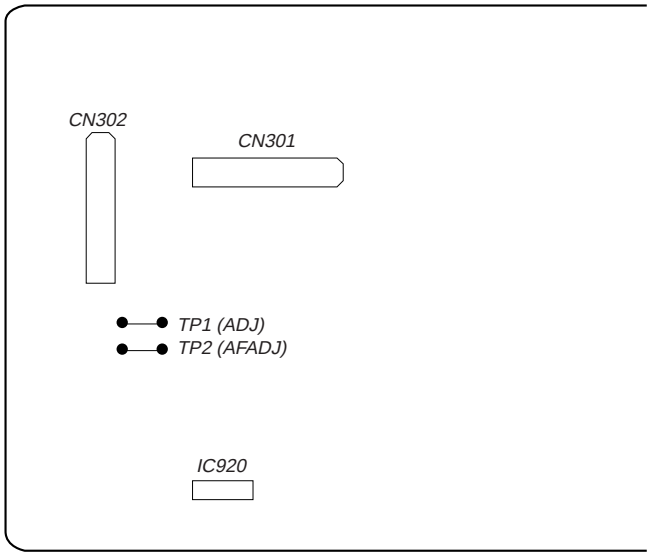
The jitter value display mode can be set after the all-music remaining number mode using the TIME button.

The functions of the number buttons are shown in the following table.

FUNCTIONS OF NUMBER BUTTONS (With the attached remote commander)

Button	Function
1	Focus bias 8-step up
2	Middle of focus bias up/down turning point
3	Tracking servo, sled servo off
4	Auto gain initialization
5	Focus servo off
6	Focus bias 8-step down
7	Immediate readjustment of focus bias
8	Tracking servo, sled servo on
10	Auto focus bias start point

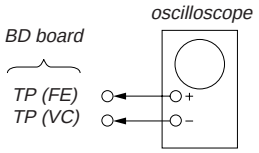
[MAIN BOARD] — Component Side —



SECTION 5
ELECTRICAL BLOCK CHECKING

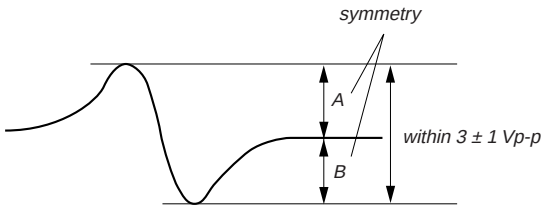
Note:
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :
1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1 Vp-p.

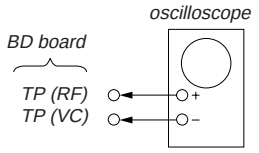
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note : • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

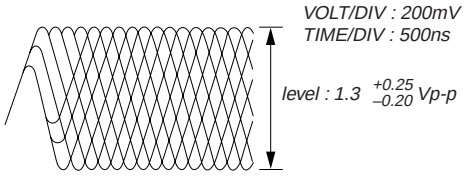
RF Level Check



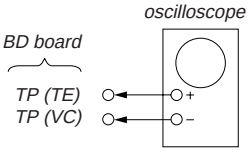
Procedure :
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note: A clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

RF signal waveform

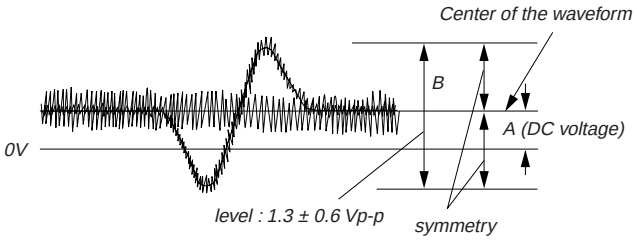


E-F Balance (1 Track Jump) Check (Without remote commander)

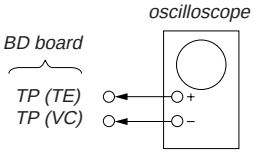


Procedure :
1. Connect oscilloscpe to test point TP (TE) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Press the "▮▮ (Pause)" button. (Becomes the 1 track jump mode)
5. Check the level B of the oscilliscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following :
   A/B x 100 = less than ± 22%

1 track jump waveform

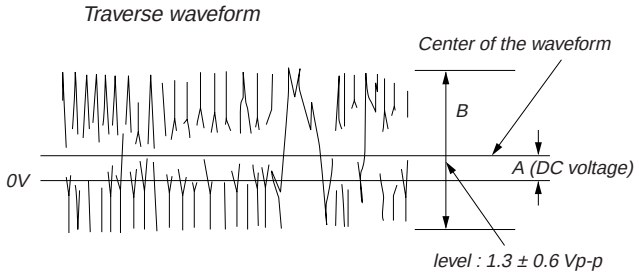


E-F Balance Check (With remote commander)

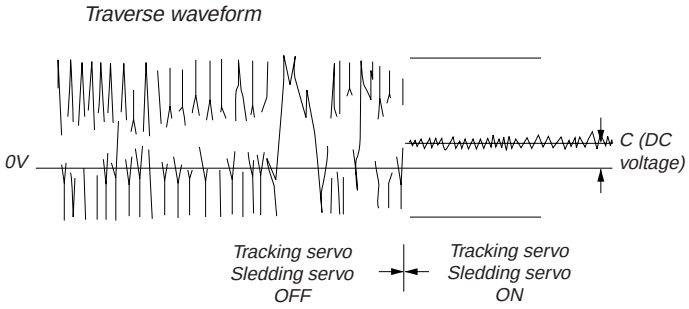


Procedure :
1. Connect the test point TP1 (ADJ) on MAIN board to the ground with a lead wire on main board.
2. Connect oscilloscpe to test point TP (TE) on BD board.
3. Turn the Power switch on to set the ADJ mode.
4. Put disc (YEDS-18) in to play the number five track.
5. Press the "3" button. (The tracking servo and the sledding servo are turned OFF.)

6. Check the level B of the oscilliscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following :
   A/B x 100 = less than ± 22%



7. Press the “8” button. (The tracking servo and sledding servo are turned ON.) Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 6.

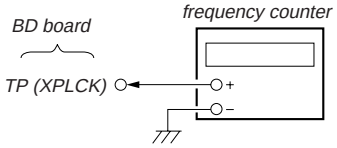


8. Disconnect the lead wire of TP1 (ADJ) connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

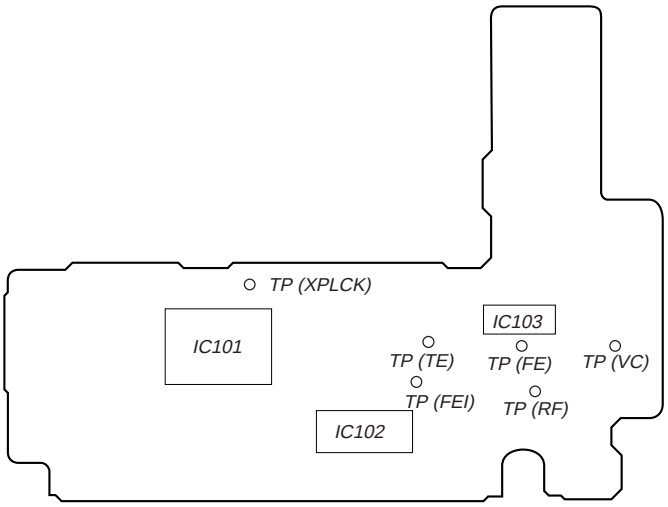
1. Connect frequency counter to test point (XPLCK) with lead wire.



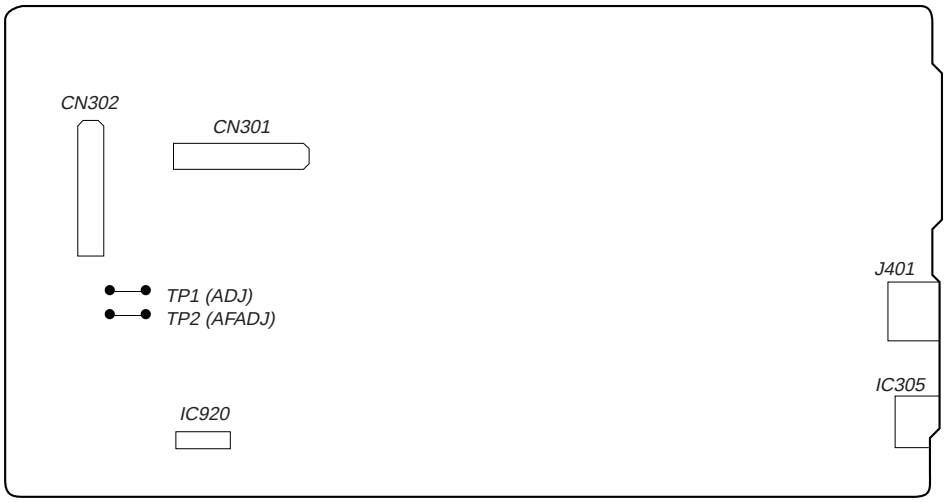
2. Turned Power switch on.
3. Put the disc (YEDS-18) in to play the number five track.
   Confirm that reading on frequency counter is 4.3218MHz.

Adjustment Location :

[BD BOARD] — Side A —

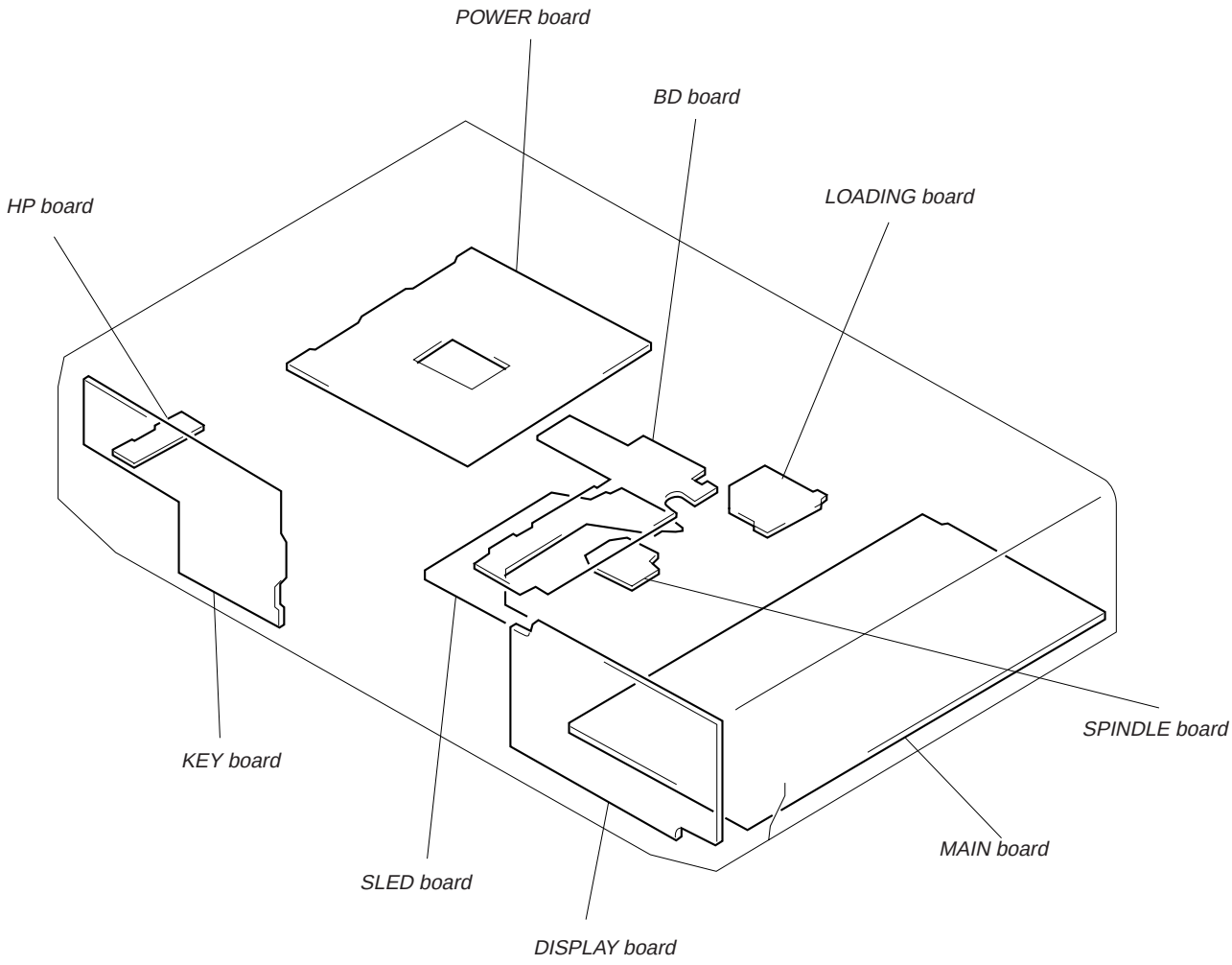


[MAIN BOARD] — Component Side —



SECTION 6
DIAGRAMS

6-1. CIRCUIT BOARDS LOCATION



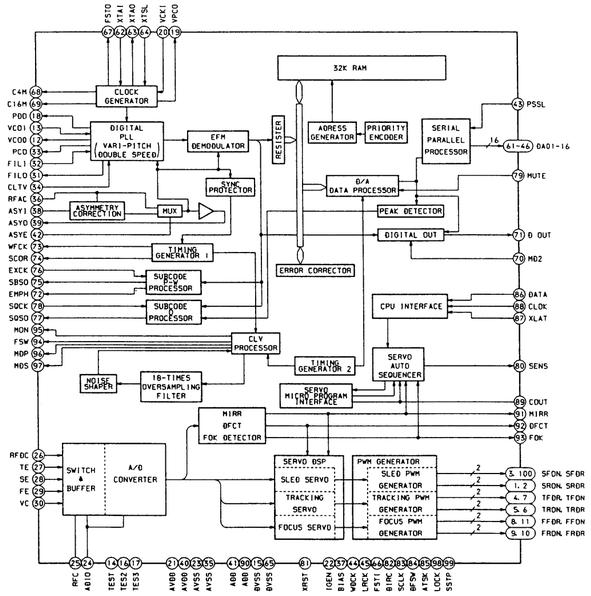
6-2. IC PIN FUNCTION

• IC801 SYSTEM CONTROL, FLUORESCENT INDICATOR TUBE DRIVE (CXP82316-069Q)

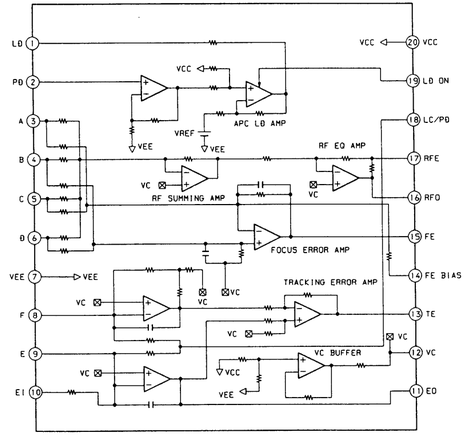
Pin No.	Pin Name	I/O	Function
1	TIMER	–	Connected to +5V.
2	RM (BUSIN)	I	Audio bus input.
3	+5V	–	Connected to +5V.
4	OPEN	–	Not used. (open)
5	OPEN	–	
6	(BUS-OUT)	–	
7	PRGL	O	Latch signal output to digital filter (IC303).
8	CLK	O	Serial clock output.
9	SENSE	I	SENSE signal input.
10	DATA	O	Serial data output.
11	SQCK	O	Read out clock output for subcode Q data.
12	SUBQ	I	Subcode Q data input.
13	OPEN	–	Not used. (open)
14	AMUTE	O	Analog muting control signal output.
15	LDON	O	Optical pickup laser diode control output.
16	XLT	O	Serial data latch signal output.
17	RVLED	–	Not used. (open)
18	RV+	O	Remote commander volume +. (Not used)
19	RV–	O	Remote commander volume –. (Not used)
20	LDOUT	O	Loading motor control signal output.
21	LDIN	O	
22 to 27	KEY0 to KEY5	I	Key input. (S801 to S810, S820 to S826, S828)
28	ADJ/AFADJ	–	ADJ, AFADJ test pin.
29	IN/OUTSW	I	Loading IN/OUT switch input.
30	RST	I	Reset signal input.
31	EXTAL	I	Clock input. (4 MHz)
32	XTAL	O	Clock output. (4 MHz)
33	V_{SS}	–	Ground
34 to 41	OPEN	–	Not used. (open)
42 to 62	S1 to S21	O	Fluorescent Indicator Tube segment output.
63 to 70	1G to 8G	O	Fluorescent Indicator Tube grid output.
71	VFDP (–30V)	–	–30V pin for Fluorescent Indicator tube.
72	V_{DD} (+5V)	–	+5V pin.
73	—	–	
74	SEL1	–	Connected to Ground.
75	IN PORT	–	Connected to +5V.
76	IN PORT	–	
77	IN PORT	–	
78	SCOR	I	Read out timing signal input for subcode Q data.
79	SEL2	–	Connected to Ground.
80	SEL3	–	Connected to Ground.

• **IC Block Diagrams**

IC101 CXD2545Q



IC103 CXA1821M-T6

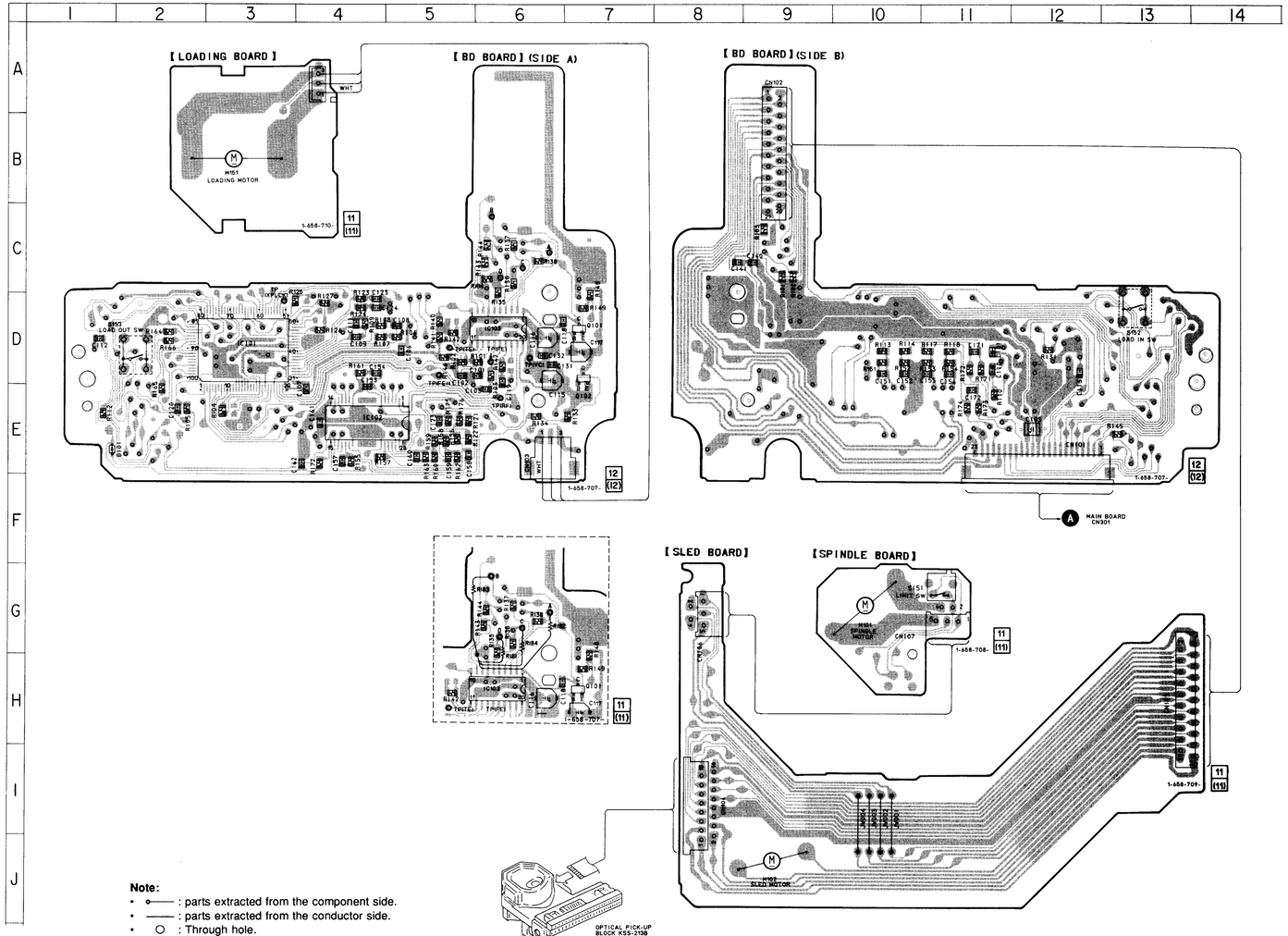


• **Semiconductor Location**

Ref. No.	Location
D101	E-1
IC101	D-3
IC102	E-4
IC103	D-6
Q101	D-7
Q102	D-7

6-3. PRINTED WIRING BOARD — BD SECTION —

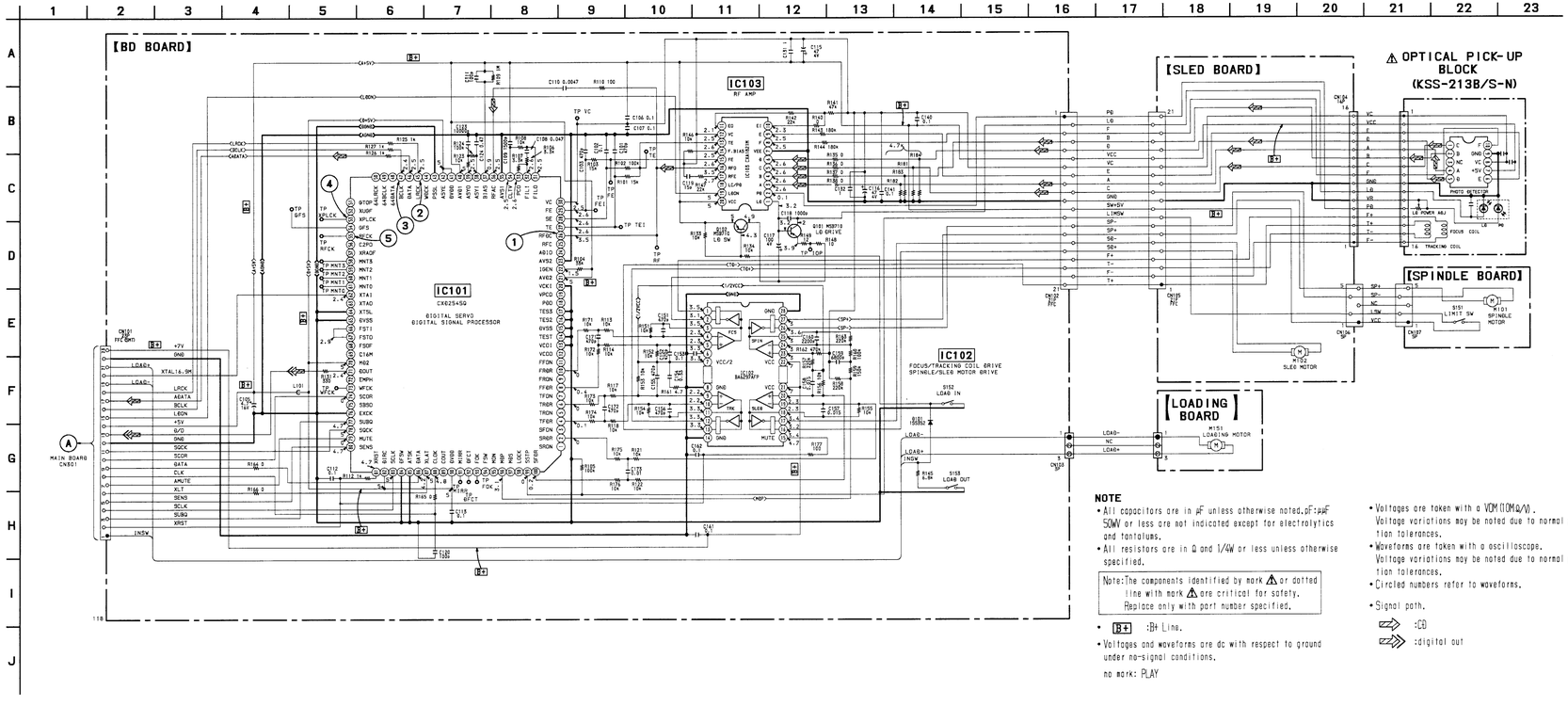
• **See page 10 for Circuit Boards Location.**



Note:

- ⟜ : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ○ : Through hole.
- ▒ : Pattern from the side which enable seeing. (The other layers' patterns are not indicated.)

6-4. SCHEMATIC DIAGRAM — BD SECTION —



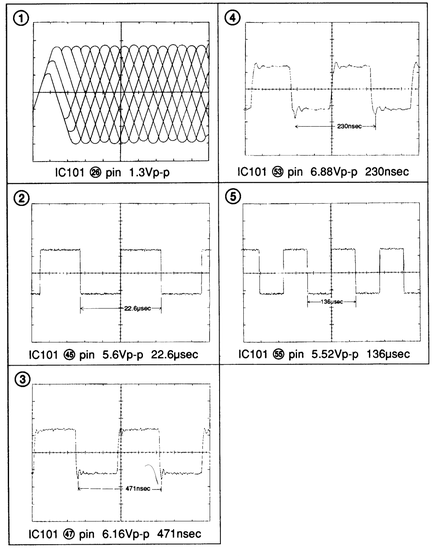
NOTE

- All capacitors are in μF unless otherwise noted. pF: pμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

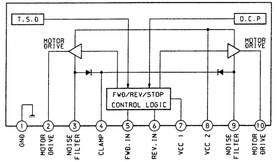
- B+ : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: PLAY
- Voltages are taken with a VOM (10MΩ/V). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : CD
  : digital out

• Waveforms

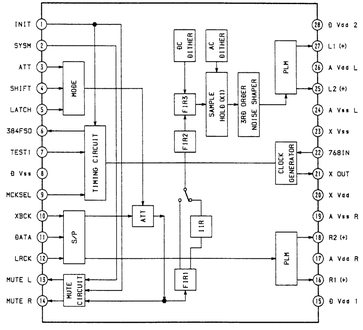


• IC Block Diagrams

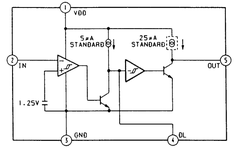
IC301 LB1641



IC303 CXD8567AM



IC920 M51957AL



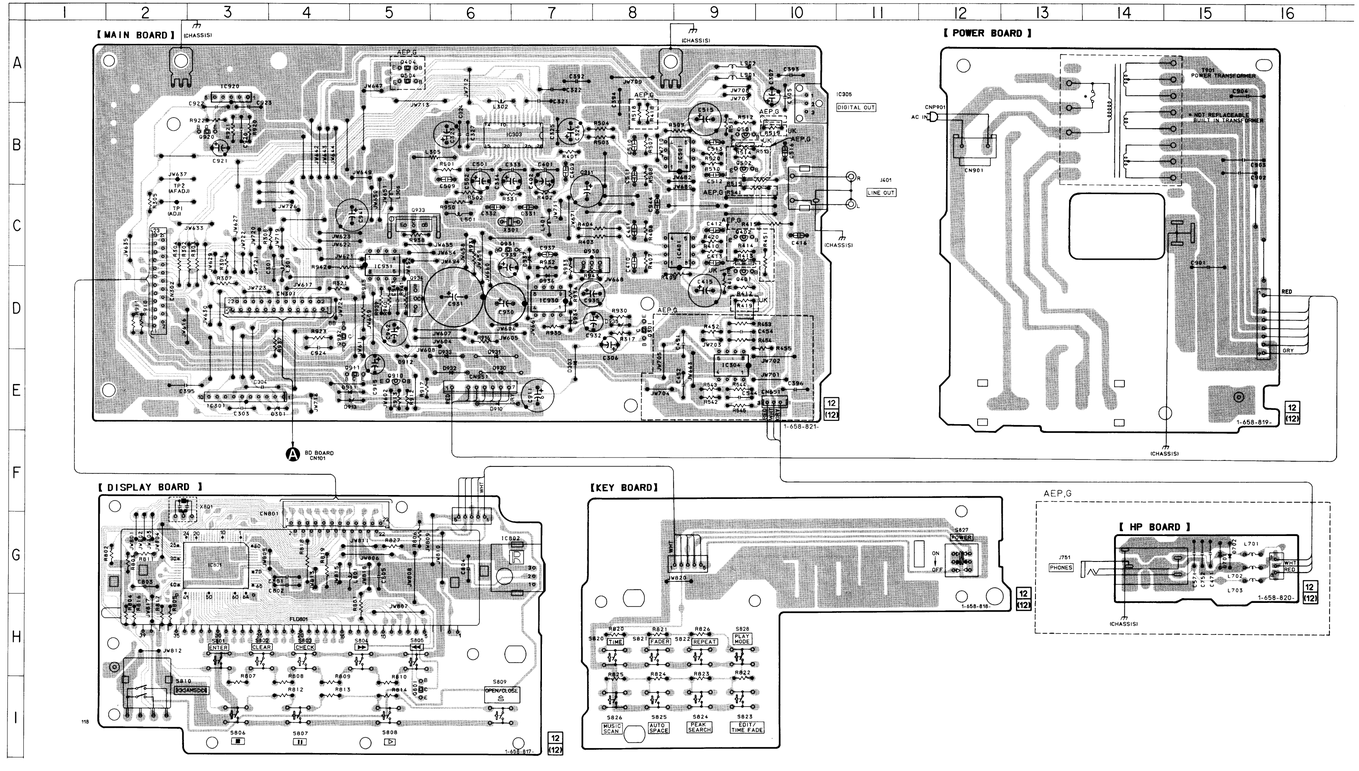
• Semiconductor Location

Ref. No.	Location
D301	E-4
D303	E-7
D701	G-15
D702	G-15
D910	E-6
D911	E-5
D912	E-5
D913	E-5
D930	E-6
D931	E-6
D932	E-6
D933	E-6
D934	D-7
D935	D-8
D936	D-7
D937	C-7
IC301	E-3
IC303	B-7
IC304	E-9
IC305	B-10
IC401	C-9
IC501	B-9
IC801	G-3
IC802	G-7
IC920	A-3
IC930	D-7
IC931	D-5
Q301	D-8
Q401	D-9
Q402	C-9
Q404	A-5
Q501	B-9
Q502	B-9
Q504	A-5
Q801	I-5
Q910	E-5
Q911	E-5
Q920	B-3
Q930	D-7
Q931	C-6
Q932	D-4
Q933	C-5
Q934	D-5

Note:
- ⟜— : parts extracted from the component side.
- △ : internal component.
- ▨ : Pattern from the side which enable seeing.
- Abbreviation
  G : German model.

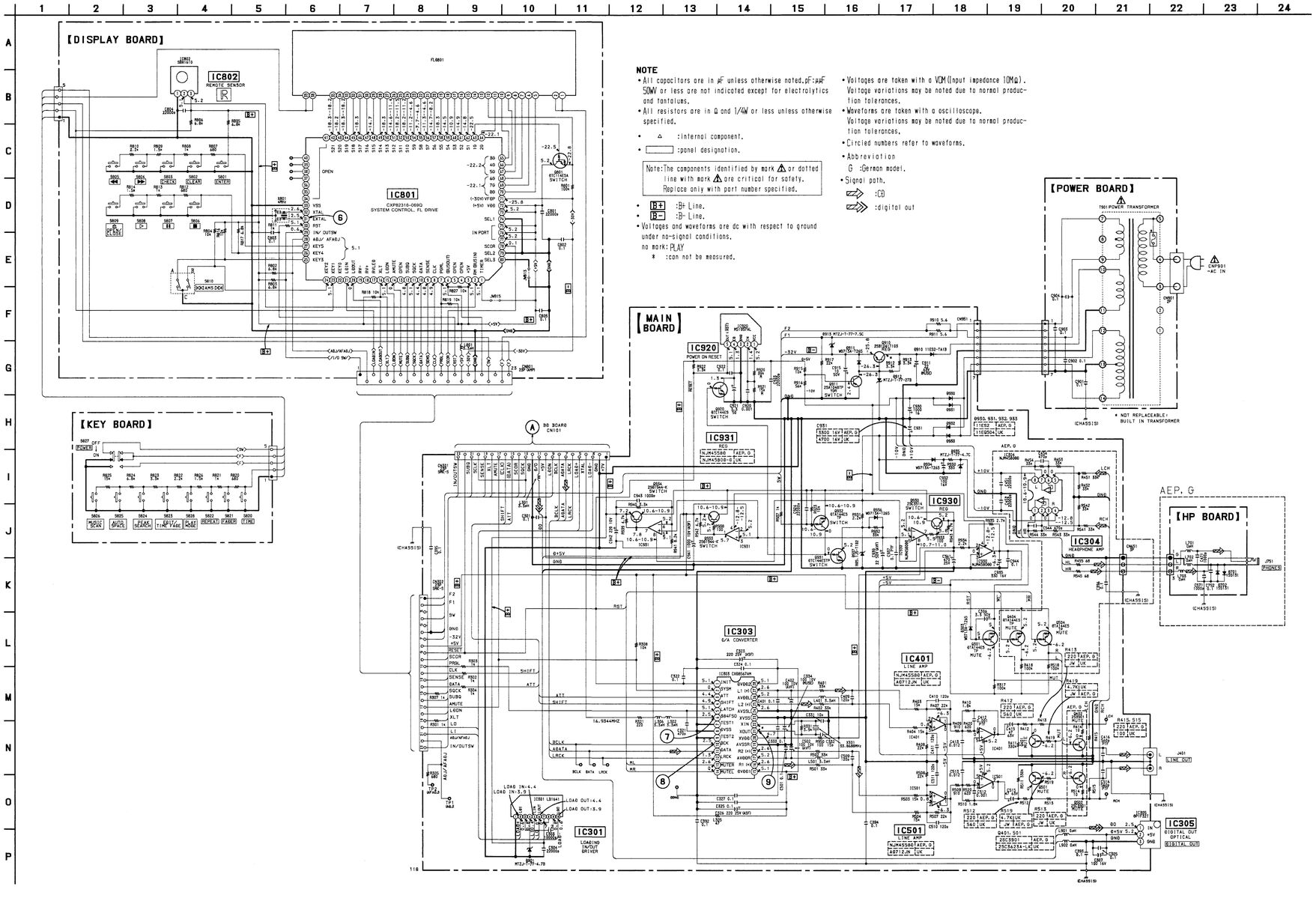
6-5. PRINTED WIRING BOARD — MAIN SECTION —

• See page 10 for Circuit Boards Location.

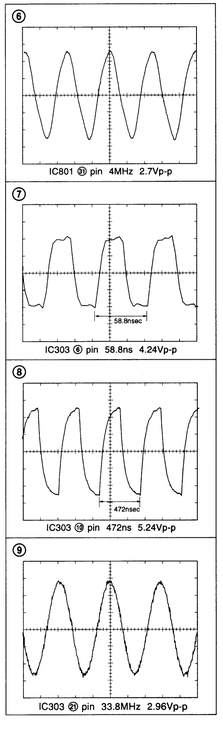


6-6. SCHEMATIC DIAGRAM — MAIN SECTION —

• See page 11 for IC Pin Function. (IC801)


【DISPLAY BOARD】
【KEY BOARD】
【MAIN BOARD】
【POWER BOARD】
【HP BOARD】
IC801
IC802
IC301
IC303
IC304
IC305
IC401
IC501
IC920
IC930
IC931
NOTE
• All capacitors are in μF unless otherwise noted. pF: μμF
50WV or less are not indicated except for electrolytics and tantalums.
• All resistors are in Ω and 1/4W or less unless otherwise specified.
• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark: PLAY
* : can not be measured.
• Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
• Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
• Circled numbers refer to waveforms.
• Abbreviation
G : German model.
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
* NOT REPLACEABLE/ BUILT IN TRANSFORMER

• Waveforms

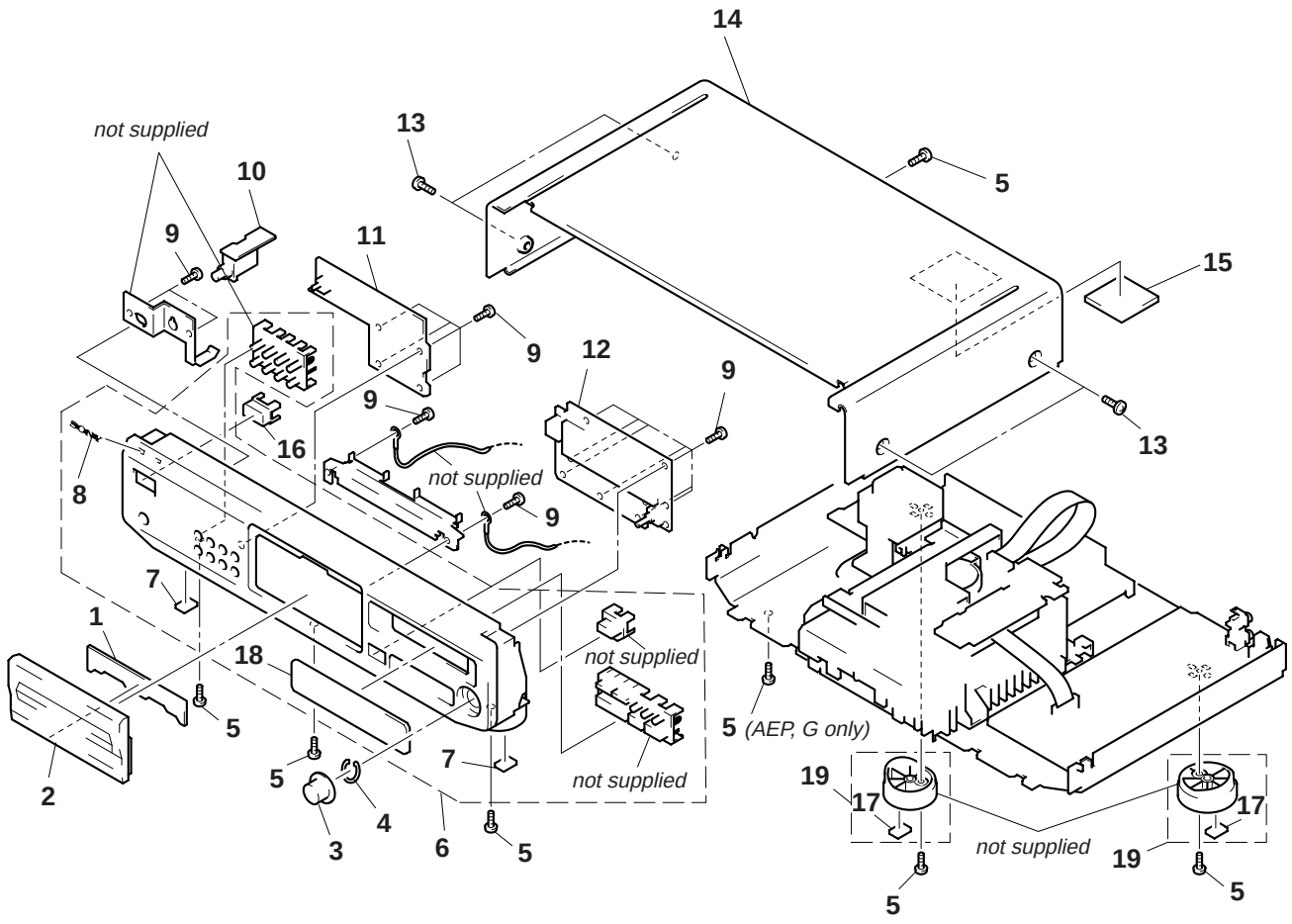


SECTION 7
EXPLODED VIEWS

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  G : German model

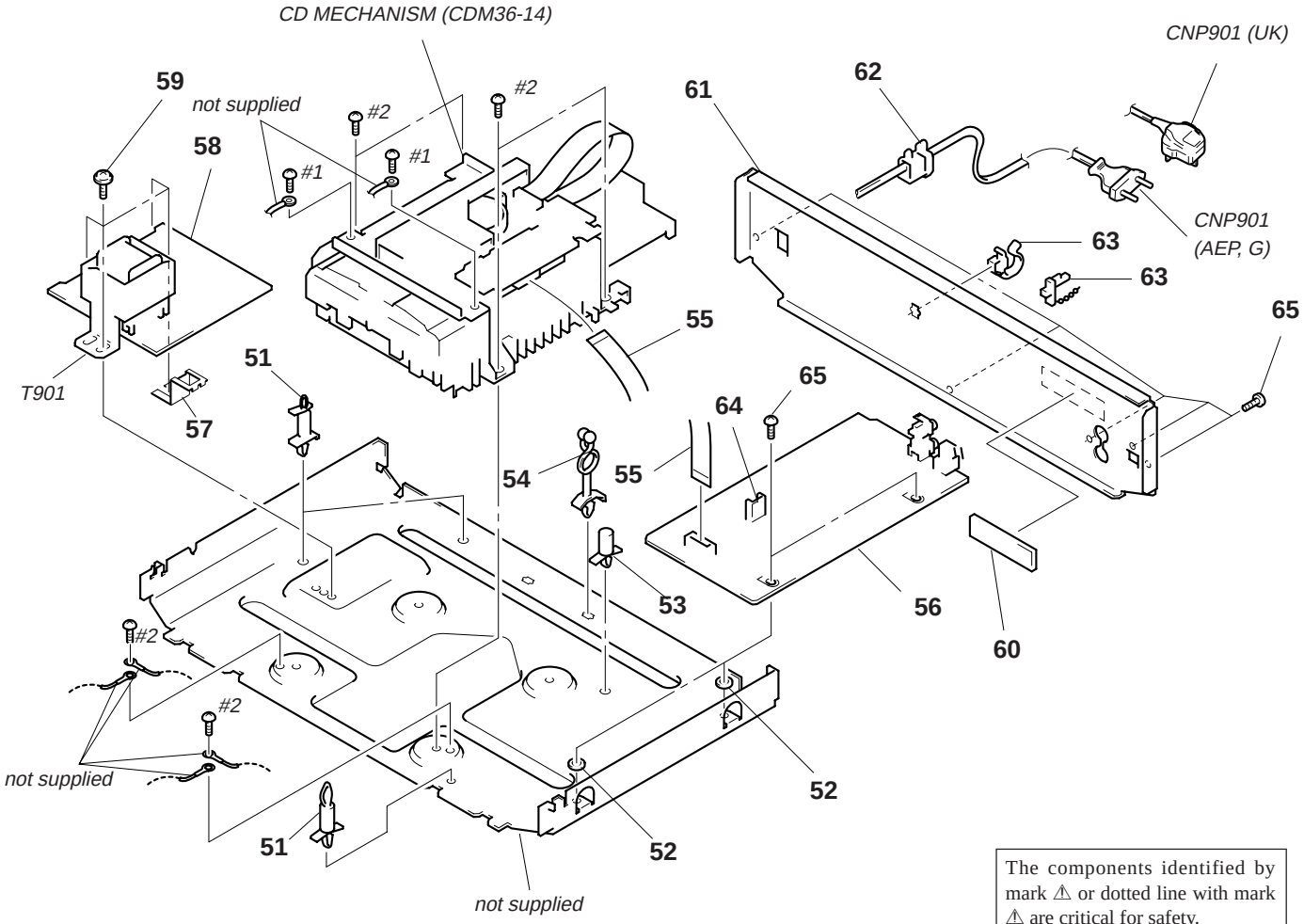
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
* 1	4-980-480-01	CUSHION (LOADING)	
2	4-978-900-01	PANEL, LOADING	
3	4-977-590-21	KNOB (AMS)	
4	3-354-981-01	SPRING (SUS), RING	
5	4-974-510-01	SCREW (+BV3X8B)(UK)	
5	7-685-646-79	SCREW +BVTP3X8 TYPE 2 N-S (AEP,G)	
6	X-4946-575-1	PANEL ASSY (ALS), FRONT	
* 7	4-978-398-11	CUSHION (UK)	
* 7	4-978-398-21	CUSHION (AEP,G)	
8	4-963-404-21	EMBLEM (5-A), SONY	
9	4-951-620-01	SCREW (2.6X8), +BVTP	
* 10	1-658-820-11	HP BOARD (AEP,G)	
* 11	1-658-818-11	KEY BOARD	
* 12	A-4673-778-A	DISPLAY BOARD, COMPLETE	
13	3-363-099-01	SCREW (CASE 3 TP2)(AEP,G)	
13	4-974-509-01	SCREW (CASE 3B)(UK)	
* 14	4-978-901-01	CASE (409526)	
* 15	4-962-329-01	DAMPER (UK)	
16	4-977-589-21	BUTTON (POWER)	
17	4-977-358-01	CUSHION (8X12.5)	
18	4-978-897-01	PLATE, INDICATION	
19	X-3371-435-1	FOOT ASSY (F50150S)	

7-2. CHASSIS SECTION

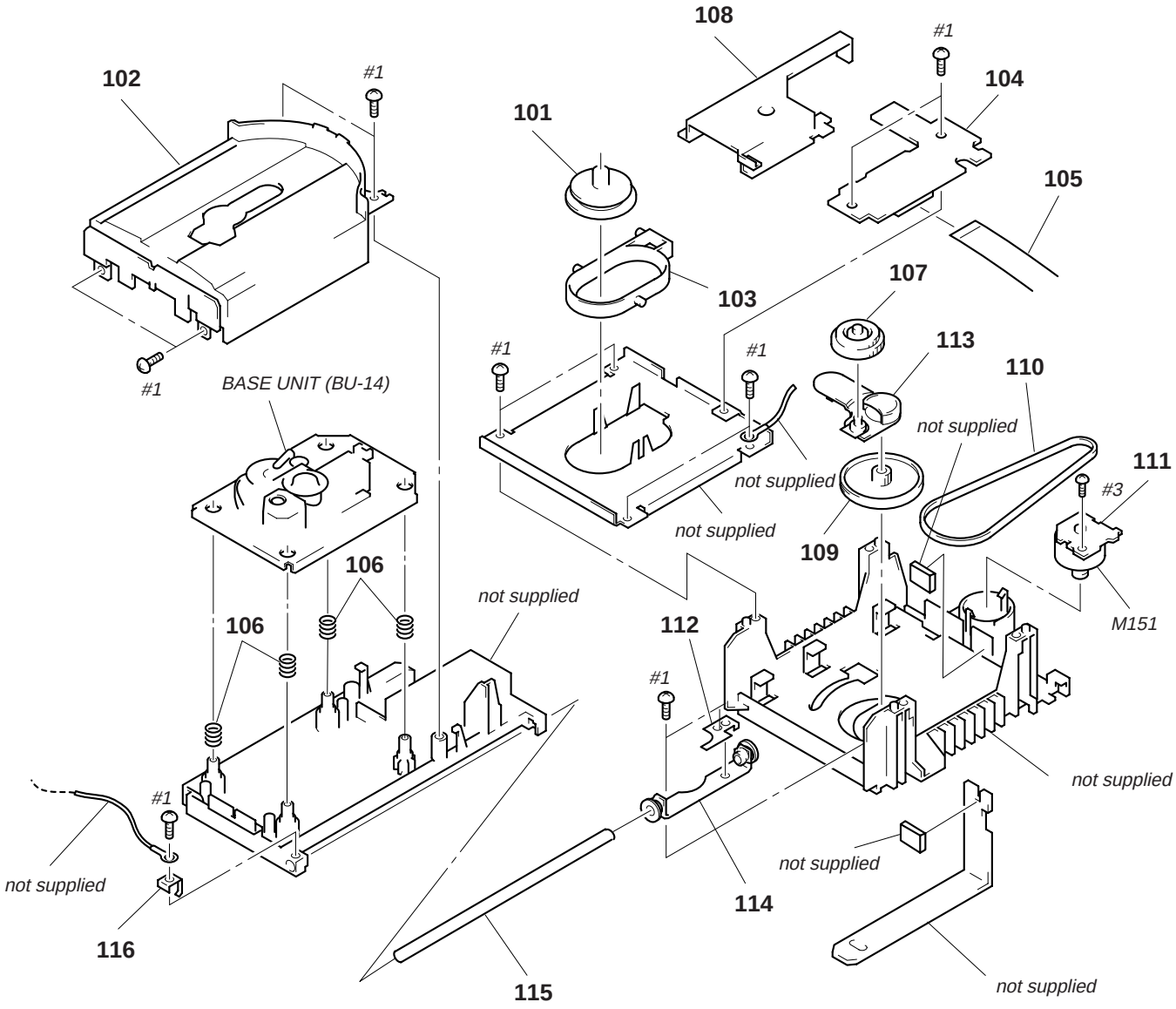


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
* 51	4-954-051-51	HOLDER, PC BOARD	
52	4-955-939-01	WASHER (CASE)	
* 53	3-349-025-41	HOLDER, PC BOARD	
54	3-703-319-00	PURSE LOCK (DIA.15)	
55	1-776-235-11	WIRE (FLAT TYPE) (23 CORE)	
* 56	A-4673-777-A	MAIN BOARD, COMPLETE (AEP,G)	
* 56	A-4673-908-A	MAIN BOARD, COMPLETE (UK)	
* 57	4-962-200-01	PLATE (TR), GROUND	
* 58	1-658-819-11	POWER BOARD	
59	2-383-566-00	SCREW	
60	4-959-077-01	DAMPER (UK)	
* 61	4-978-904-11	PANEL, BACK (AEP,G)	

Ref. No.	Part No.	Description	Remark
* 61	4-978-904-81	PANEL, BACK (UK)	
62	3-703-244-00	BUSHING, CORD	
* 63	4-949-235-01	HOOK (AEP,G)	
63	4-956-370-02	BAND, PLUG FIXED (UK)	
* 64	3-309-144-21	HEAT SINK	
65	4-974-510-01	SCREW (+BV3X8 B)(UK)	
65	7-685-646-79	SCREW +BVTP3X8 TYPE2 N-S (AEP,G)	
66	4-956-619-01	LABEL, LASER CAUTION (UK)	
66	4-950-813-01	LABEL, LASER CAUTION (AEP,G)	
⚠CNP901	1-575-651-21	CORD, POWER (AEP,G)	
⚠CNP901	1-696-907-11	CORD, POWER (UK)	
⚠T901	1-429-367-11	TRANSFORMER, POWER	

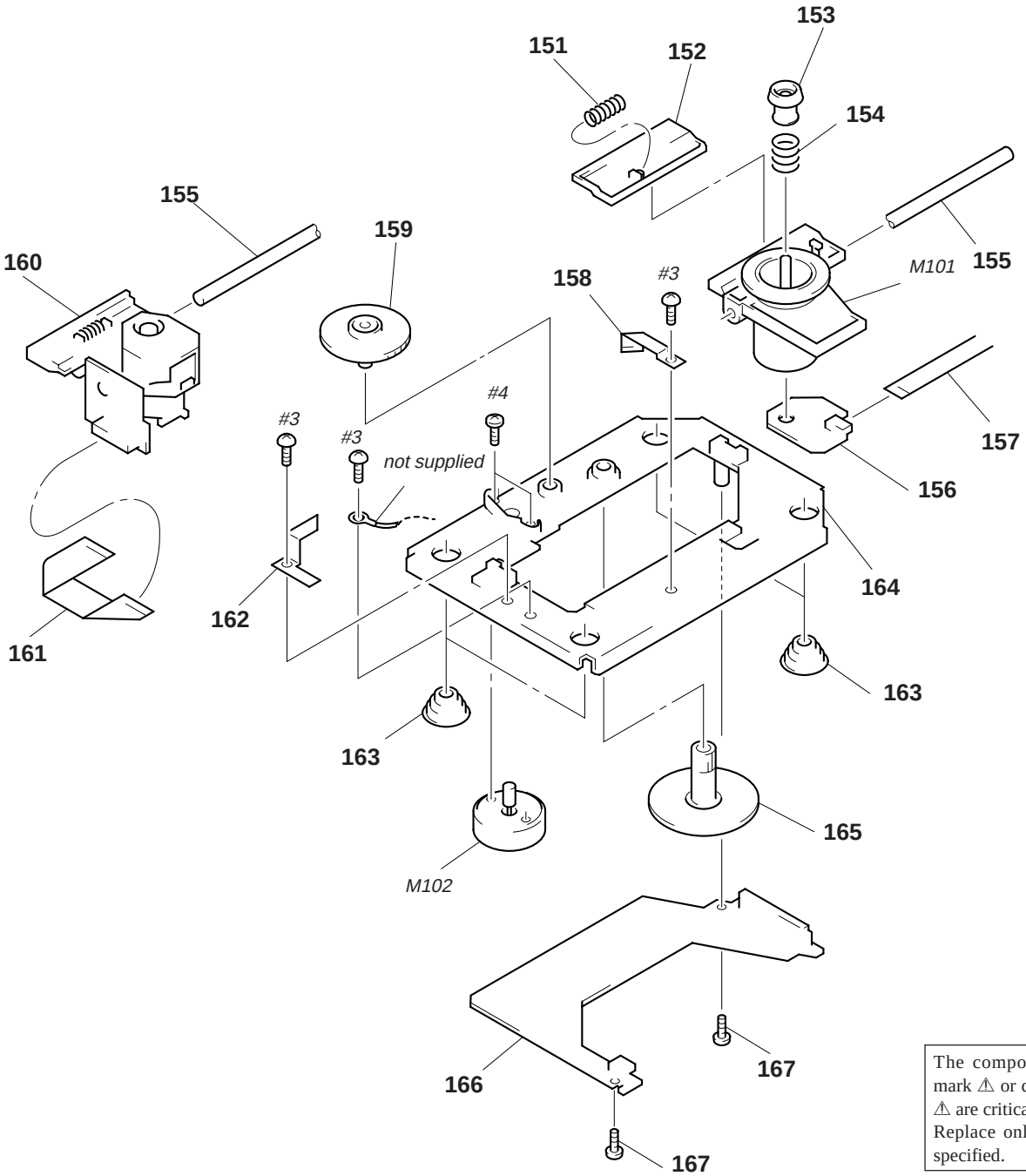
7-3. CD MECHANISM SECTION (CDM36-14)



Ref. No.	Part No.	Description	Remark
101	1-452-820-11	MAGNET (ASSY)	
* 102	4-977-902-01	PANEL (DRAWER)	
* 103	4-977-894-01	HOLDER (AP)	
* 104	A-4673-722-A	BD BOARD, COMPLETE	
105	1-776-998-11	WIRE (FLAT TYPE) (21 CORE)	
106	4-948-503-01	SPRING (BU), COMPRESSION	
107	4-977-897-01	GEAR	
* 108	4-977-893-01	CAM, SLIDE	
109	4-977-896-01	PULLEY	

Ref. No.	Part No.	Description	Remark
110	4-968-905-01	BELT (CDM)	
* 111	1-658-710-11	LOADING BOARD	
* 112	4-977-891-01	PLATE, GROUND	
113	4-977-898-01	LEVER (SWING)	
* 114	4-977-892-01	BEARING	
* 115	4-977-888-01	SHAFT	
* 116	4-977-889-01	PLATE (BU), GROUND	
M151	A-4660-968-A	MOTOR ASSY (LOADING)	

7-4. BASE UNIT SECTION (BU-14)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
151	4-977-925-01	SPRING(SLIDE BASE),COMPRESSION	
152	4-977-926-01	RACK, SLIDE	
153	4-977-915-01	CAP, CENTERING	
154	4-977-927-01	SPRING (CENTERING),COMPRESSION	
155	4-977-923-01	SHAFT, SLED	
* 156	1-658-708-11	SPINDLE BOARD	
157	1-775-990-11	WIRE (FLAT TYPE) (5 CORE)	
* 158	4-977-928-01	SPRING (SPINDLE), LEAF	
159	4-977-921-01	GEAR (B), FLAT	
⚠160	8-848-376-01	OPTICAL PICK-UP KSS-213B/S-N	

Ref. No.	Part No.	Description	Remark
161	1-775-991-11	WIRE (FLAT TYPE) (16 CORE)	
* 162	4-977-924-01	SPRING (OP), LEAF	
163	4-951-940-01	INSULATOR (BU)	
* 164	4-977-918-01	BASE (OUTSERT)	
165	4-977-920-01	GEAR (C), FLAT	
* 166	1-658-709-11	SLED BOARD	
167	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4947-304-1	MOTOR ASSY (SPINDLE)	
M102	X-4947-303-1	MOTOR ASSY (SLED)	

SECTION 8
ELECTRICAL PARTS LIST

BD

Note:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: µ , for example:
  uA...: µ A..., uPA...: µ PA..., uPB...: µ PB..., uPC...: µ PC..., uPD...: µ PD...
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H
- Abbreviation
  G : German model

Ref. No.	Part No.	Description			Remark
*	A-4673-722-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C107	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C108	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C109	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-126-607-11	ELECT CHIP	47uF	20%	4V
C117	1-126-209-11	ELECT	100uF	20%	4V
C118	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C119	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C120	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C121	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C123	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C131	1-164-346-11	CERAMIC CHIP	1uF		16V
C132	1-164-346-11	CERAMIC CHIP	1uF		16V
C140	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C151	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C152	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C153	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C155	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C156	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C157	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C158	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C159	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C160	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C161	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C162	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C171	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C172	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C173	1-164-232-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CN101	1-770-072-11	CONNECTOR, FFC 23P			
CN102	1-750-753-11	CONNECTOR, FFC/FPC 21P			
CN103	1-774-653-21	PIN, CONNECTOR (PC BOARD) 3P			
		< DIODE >			
D101	8-719-016-74	DIODE 1SS352			
		< IC >			
IC101	8-752-369-78	IC CXD2545Q			
IC102	8-759-071-79	IC BA6297AFP			
IC103	8-752-072-45	IC CXA1821M-T6			
		< COIL >			
L101	1-414-234-11	INDUCTOR, FERRITE BEAD			
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR MSB710-R			
Q102	8-729-010-08	TRANSISTOR MSB710-R			
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W
R109	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R110	1-216-025-91	METAL GLAZE	100	5%	1/10W
R112	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R113	1-216-073-00	METAL CHIP	10K	5%	1/10W
R114	1-216-073-00	METAL CHIP	10K	5%	1/10W
R117	1-216-073-00	METAL CHIP	10K	5%	1/10W
R118	1-216-073-00	METAL CHIP	10K	5%	1/10W
R121	1-216-073-00	METAL CHIP	10K	5%	1/10W
R122	1-216-073-00	METAL CHIP	10K	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R125	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R126	1-216-049-91	METAL GLAZE	1K	5%	1/10W

BD DISPLAY

Ref. No.	Part No.	Description			Remark
R127	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R131	1-216-037-00	METAL CHIP	330	5%	1/10W
R133	1-216-073-00	METAL CHIP	10K	5%	1/10W
R134	1-216-073-00	METAL CHIP	10K	5%	1/10W
R135	1-216-295-91	CONDUCTOR, CHIP(2012)			
R136	1-216-295-91	CONDUCTOR, CHIP(2012)			
R137	1-216-295-91	CONDUCTOR, CHIP(2012)			
R138	1-216-295-91	CONDUCTOR, CHIP(2012)			
R140	1-216-295-91	CONDUCTOR, CHIP(2012)			
R141	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R142	1-216-081-00	METAL CHIP	22K	5%	1/10W
R143	1-216-103-91	METAL GLAZE	180K	5%	1/10W
R144	1-216-103-91	METAL GLAZE	180K	5%	1/10W
R145	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R146	1-216-073-00	METAL CHIP	10K	5%	1/10W
R147	1-216-081-00	METAL CHIP	22K	5%	1/10W
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-003-11	METAL GLAZE	12	5%	1/10W
R151	1-216-073-00	METAL CHIP	10K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-073-00	METAL CHIP	10K	5%	1/10W
R154	1-216-073-00	METAL CHIP	10K	5%	1/10W
R155	1-216-073-00	METAL CHIP	10K	5%	1/10W
R156	1-216-073-00	METAL CHIP	10K	5%	1/10W
R157	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R158	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R159	1-216-101-00	METAL CHIP	150K	5%	1/10W
R160	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R161	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R162	1-216-113-00	METAL CHIP	470K	5%	1/10W
R163	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R164	1-216-295-91	CONDUCTOR, CHIP(2012)			
R165	1-216-295-91	CONDUCTOR, CHIP(2012)			
R166	1-216-295-91	CONDUCTOR, CHIP(2012)			
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W
R172	1-216-073-00	METAL CHIP	10K	5%	1/10W
R173	1-216-073-00	METAL CHIP	10K	5%	1/10W
R174	1-216-073-00	METAL CHIP	10K	5%	1/10W
R175	1-216-073-00	METAL CHIP	10K	5%	1/10W
R176	1-216-073-00	METAL CHIP	10K	5%	1/10W
R177	1-216-025-91	METAL GLAZE	100	5%	1/10W
R181	1-249-425-11	CARBON	4.7K	5%	1/4W (suffix-11)
R181	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (suffix-12)
R182	1-249-425-11	CARBON	4.7K	5%	1/4W (suffix-11)
R182	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (suffix-12)
R183	1-249-425-11	CARBON	4.7K	5%	1/4W (suffix-11)
R183	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (suffix-12)
R184	1-249-425-11	CARBON	4.7K	5%	1/4W (suffix-11)

Ref. No.	Part No.	Description			Remark
R184	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (suffix-12)
		< SWITCH >			
S152	1-762-010-11	SWITCH, LEVER (LOAD IN)			
S153	1-762-010-11	SWITCH, LEVER (LOAD OUT)			
**********					
*	A-4673-778-A	DISPLAY BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C801	1-161-494-00	CERAMIC	0.022uF		25V
C802	1-164-159-21	CERAMIC	0.1uF		50V
C803	1-164-159-21	CERAMIC	0.1uF		50V
C804	1-161-494-00	CERAMIC	0.022uF		25V
C805	1-164-159-21	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN801	1-568-865-11	SOCKET, CONNECTOR 23P			
		< FLUORESCENT INDICATOR >			
FLD801	1-519-757-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC801	8-752-875-32	IC CXP82316-069Q			
IC802	8-741-810-59	IC SBX1810-59			
		< COIL >			
L801	1-410-322-11	INDUCTOR 3.3uH			
		< TRANSISTOR >			
Q801	8-729-029-67	TRANSISTOR DTC114ESA-TP			
		< RESISTOR >			
R801	1-249-441-11	CARBON	100K	5%	1/4W
R802	1-249-427-11	CARBON	6.8K	5%	1/4W
R803	1-249-427-11	CARBON	6.8K	5%	1/4W
R804	1-249-429-11	CARBON	10K	5%	1/4W
R805	1-249-427-11	CARBON	6.8K	5%	1/4W
R806	1-249-427-11	CARBON	6.8K	5%	1/4W
R807	1-249-415-11	CARBON	680	5%	1/4W
R808	1-249-417-11	CARBON	1K	5%	1/4W
R809	1-249-419-11	CARBON	1.5K	5%	1/4W
R810	1-249-421-11	CARBON	2.2K	5%	1/4W
R811	1-249-417-11	CARBON	1K	5%	1/4W
R812	1-249-415-11	CARBON	680	5%	1/4W
R813	1-249-417-11	CARBON	1K	5%	1/4W
R814	1-249-419-11	CARBON	1.5K	5%	1/4W
R816	1-249-429-11	CARBON	10K	5%	1/4W
R817	1-249-427-11	CARBON	6.8K	5%	1/4W
R818	1-249-429-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R819	1-249-429-11	CARBON	10K	5%	1/4W
R827	1-249-429-11	CARBON	10K	5%	1/4W
		< SWITCH >			
S801	1-554-303-21	SWITCH, TACTILE (ENTER)			
S802	1-554-303-21	SWITCH, TACTILE (CLEAR)			
S803	1-554-303-21	SWITCH, TACTILE (CHECK)			
S804	1-554-303-21	SWITCH, TACTILE (▶▶)			
S805	1-554-303-21	SWITCH, TACTILE (◀◀)			
S806	1-554-303-21	SWITCH, TACTILE (■)			
S807	1-554-303-21	SWITCH, TACTILE (❚❚)			
S808	1-554-303-21	SWITCH, TACTILE (▷)			
S809	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)			
S810	1-473-452-11	ENCODER, ROTARY (⏮◁◁ AMS ▷▷⏭)			
		< VIBRATOR >			
X801	1-577-082-11	VIBRATOR, CERAMIC (4MHz)			
**********					
*	1-658-820-11	HP BOARD (AEP,G)			
		**********			
		< CAPACITOR >			
C471	1-162-294-31	CERAMIC	0.001uF	10%	50V (AEP,G)
C571	1-162-294-31	CERAMIC	0.001uF	10%	50V (AEP,G)
C752	1-164-159-21	CERAMIC	0.1uF		50V (AEP,G)
		< DIODE >			
D701	8-719-815-85	DIODE 1S1585 (AEP,G)			
D702	8-719-815-85	DIODE 1S1585 (AEP,G)			
		< JACK >			
J751	1-770-307-11	JACK (LARGE TYPE)(PHONES)(AEP,G)			
		< COIL >			
L701	1-424-122-11	FILTER, NOISE (AEP,G)			
L702	1-424-122-11	FILTER, NOISE (AEP,G)			
L703	1-424-122-11	FILTER, NOISE (AEP,G)			
**********					
*	1-658-818-11	KEY BOARD			
		**********			
		< RESISTOR >			
R820	1-249-415-11	CARBON	680	5%	1/4W
R821	1-249-417-11	CARBON	1K	5%	1/4W
R822	1-249-421-11	CARBON	2.2K	5%	1/4W
R823	1-249-423-11	CARBON	3.3K	5%	1/4W
R824	1-249-427-11	CARBON	6.8K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R825	1-249-431-11	CARBON	15K	5%	1/4W
R826	1-249-419-11	CARBON	1.5K	5%	1/4W
		< SWITCH >			
S820	1-554-303-21	SWITCH, TACTILE (TIME)			
S821	1-554-303-21	SWITCH, TACTILE (FADER)			
S822	1-554-303-21	SWITCH, TACTILE (REPEAT)			
S823	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)			
S824	1-554-303-21	SWITCH, TACTILE (PEAK SEARCH)			
S825	1-554-303-21	SWITCH, TACTILE (AUTO SPACE)			
S826	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)			
S827	1-554-118-00	SWITCH, PUSH (1 KEY)(POWER)			
S828	1-554-303-21	SWITCH, TACTILE (PLAY MODE)			
**********					
*	1-658-710-11	LOADING BOARD			
		**********			
**********					
*	A-4673-777-A	MAIN BOARD, COMPLETE (AEP,G)			
		**********			
*	A-4673-908-A	MAIN BOARD, COMPLETE (UK)			
		**********			
*	3-309-144-21	HEAT SINK			
	7-685-871-01	SCREW +BVTT 3X6 (S)			
*	1-537-738-21	TERMINAL, EARTH			
		< CAPACITOR >			
C301	1-164-159-21	CERAMIC	0.1uF		50V
C303	1-162-306-11	CERAMIC	0.01uF	30%	16V
C304	1-161-494-00	CERAMIC	0.022uF		25V
C305	1-164-159-21	CERAMIC	0.1uF		50V
C306	1-126-962-11	ELECT	3.3uF	20%	50V
C307	1-104-665-11	ELECT	100uF	20%	16V
C321	1-162-290-31	CERAMIC	470PF	10%	50V
C322	1-164-159-21	CERAMIC	0.1uF		50V
C323	1-126-024-11	ELECT	220uF	20%	25V
C324	1-164-159-21	CERAMIC	0.1uF		50V
C325	1-164-159-21	CERAMIC	0.1uF		50V
C326	1-126-024-11	ELECT	220uF	20%	25V
C327	1-164-159-21	CERAMIC	0.1uF		50V
C331	1-102-508-91	CERAMIC	10PF	0.5PF	50V
C332	1-102-951-00	CERAMIC	15PF	5%	50V
C333	1-164-159-21	CERAMIC	0.1uF		50V
C334	1-124-994-11	ELECT	100uF	20%	10V
C361	1-126-026-11	ELECT	470uF	20%	25V
C392	1-164-159-21	CERAMIC	0.1uF		50V
C393	1-164-159-21	CERAMIC	0.1uF		50V
C394	1-164-159-21	CERAMIC	0.1uF		50V
C395	1-164-159-21	CERAMIC	0.1uF		50V
C396	1-164-159-21	CERAMIC	0.1uF		50V (AEP,G)

MAIN

Ref. No.	Part No.	Description			Remark
C401	1-164-159-21	CERAMIC	0.1uF		50V
C402	1-124-994-11	ELECT	100uF	20%	10V
C409	1-102-816-00	CERAMIC	120PF	5%	50V
C410	1-102-816-00	CERAMIC	120PF	5%	50V
C411	1-102-816-00	CERAMIC	120PF	5%	50V
C412	1-106-343-00	MYLAR	1000PF	5%	200V
C413	1-130-484-00	MYLAR	0.012uF	5%	50V
C415	1-128-200-11	ELECT	47uF	20%	63V
C416	1-130-468-00	MYLAR	560PF	5%	50V
C451	1-161-494-00	CERAMIC	0.022uF		25V (AEP,G)
C452	1-161-494-00	CERAMIC	0.022uF		25V (AEP,G)
C454	1-162-290-31	CERAMIC	470PF	10%	50V (AEP,G)
C501	1-164-159-21	CERAMIC	0.1uF		50V
C502	1-124-994-11	ELECT	100uF	20%	10V
C509	1-102-816-00	CERAMIC	120PF	5%	50V
C510	1-102-816-00	CERAMIC	120PF	5%	50V
C511	1-102-816-00	CERAMIC	120PF	5%	50V
C512	1-106-343-00	MYLAR	1000PF	5%	200V
C513	1-130-484-00	MYLAR	0.012uF	5%	50V
C515	1-128-200-11	ELECT	47uF	20%	63V
C516	1-130-468-00	MYLAR	560PF	5%	50V
C544	1-162-290-31	CERAMIC	470PF	10%	50V (AEP,G)
C911	1-128-198-11	ELECT	22uF	20%	63V
C915	1-124-907-11	ELECT	10uF	20%	50V
C920	1-162-294-31	CERAMIC	0.001uF	10%	50V
C921	1-126-962-11	ELECT	3.3uF	20%	50V
C922	1-164-159-21	CERAMIC	0.1uF		50V
C923	1-161-494-00	CERAMIC	0.022uF		25V
C924	1-161-494-00	CERAMIC	0.022uF		25V
C930	1-126-942-61	ELECT	1000uF	20%	16V (AEP,G)
C930	1-124-360-00	ELECT	1000uF	20%	16V (UK)
C931	1-126-944-11	ELECT	3300uF	20%	16V (AEP,G)
C931	1-124-523-11	ELECT	4700uF	20%	16V (UK)
C932	1-104-665-11	ELECT	100uF	20%	16V
C935	1-126-011-11	ELECT	330uF	20%	16V
C937	1-130-495-00	MYLAR	0.1uF	5%	50V (AEP,G)
C937	1-136-850-11	FILM	0.1uF	5%	63V (UK)
C939	1-126-049-11	ELECT	22uF	20%	50V
C941	1-124-473-11	ELECT	1000uF	20%	10V
C942	1-104-666-11	ELECT	220uF	20%	10V
C943	1-162-294-31	CERAMIC	0.001uF	10%	50V
C944	1-130-495-00	MYLAR	0.1uF	5%	50V (AEP,G)
C944	1-136-850-11	FILM	0.1uF	5%	63V (UK)
		< CONNECTOR >			
* CN301	1-568-839-11	SOCKET, CONNECTOR 23P			
* CN302	1-568-839-11	SOCKET, CONNECTOR 23P			
CN651	1-506-468-11	PIN, CONNECTOR 3P (AEP,G)			
CN951	1-766-269-11	PIN, CONNECTOR (PC BOARD) 7P			
		< DIODE >			
D301	8-719-010-34	DIODE UZ-4.7BSC			
D303	8-719-911-19	DIODE 1SS119			
D910	8-719-200-82	DIODE 11ES2			
D911	8-719-911-19	DIODE 1SS119			
D912	8-719-982-15	DIODE MTZJ-27B			
D913	8-719-110-03	DIODE RD7.5ESB2			
D930	8-719-200-82	DIODE 11ES2 (AEP,G)			
D930	8-719-210-21	DIODE 11EQS04 (UK)			
D931	8-719-200-82	DIODE 11ES2 (AEP,G)			
D931	8-719-210-21	DIODE 11EQS04 (UK)			
D932	8-719-200-82	DIODE 11ES2 (AEP,G)			
D932	8-719-210-21	DIODE 11EQS04 (UK)			
D933	8-719-200-82	DIODE 11ES2 (AEP,G)			
D933	8-719-210-21	DIODE 11EQS04 (UK)			
D934	8-719-911-19	DIODE 1SS119			
D935	8-719-921-40	DIODE MTZJ-4.7C			
D936	8-719-911-19	DIODE 1SS119			
D937	8-719-115-38	DIODE RD5.1JS-T1B2			
		< IC >			
IC301	8-759-822-09	IC LB1641			
IC303	8-759-362-47	IC CXD8567AM			
IC304	8-759-710-59	IC NJM4580D-D (AEP,G)			
IC305	8-749-921-12	IC GP1F32T (DIGITAL OUT)			
IC401	8-759-634-51	IC M5218AP (AEP,G)			
IC401	8-759-971-80	IC AD712JN (UK)			
IC501	8-759-634-51	IC M5218AP (AEP,G)			
IC501	8-759-971-80	IC AD712JN (UK)			
IC920	8-759-636-16	IC M51957AL			
IC930	8-759-710-59	IC NJM4580D-D			
IC931	8-759-634-51	IC M5218AP (AEP,G)			
IC931	8-759-710-59	IC NJM4580D-D (UK)			
		< JACK >			
J401	1-770-719-11	JACK, PIN 2P (LINE OUT)(AEP,G)			
J401	1-774-727-11	JACK, PIN 2P (LINE OUT)(UK)			
		< COIL >			
L301	1-410-322-11	INDUCTOR 3.3uH			
L302	1-410-322-11	INDUCTOR 3.3uH			
L305	1-249-401-11	CARBON 47	5%	1/4W	
L306	1-410-322-11	INDUCTOR 3.3uH			
L401	1-410-322-11	INDUCTOR 3.3uH			
L501	1-410-322-11	INDUCTOR 3.3uH			
L901	1-412-473-41	INDUCTOR 0uH			
L902	1-412-473-41	INDUCTOR 0uH			
		< TRANSISTOR >			
Q301	8-729-029-56	TRANSISTOR DTA144ESA			

Ref. No.	Part No.	Description				Remark
Q401	8-729-900-74	TRANSISTOR	DTC143TS (AEP,G)			
Q401	8-729-141-30	TRANSISTOR	2SC3623A-LK (UK)			
Q402	8-729-900-74	TRANSISTOR	DTC143TS (AEP,G)			
Q404	8-729-029-56	TRANSISTOR	DTA144ESA (AEP,G)			
Q501	8-729-900-74	TRANSISTOR	DTC143TS (AEP,G)			
Q501	8-729-141-30	TRANSISTOR	2SC3623A-LK (UK)			
Q502	8-729-900-74	TRANSISTOR	DTC143TS (AEP,G)			
Q504	8-729-029-56	TRANSISTOR	DTA144ESA (AEP,G)			
Q910	8-729-019-64	TRANSISTOR	2SB1041			
Q911	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q920	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q930	8-729-104-18	TRANSISTOR	2SC3514-Q			
Q931	8-729-030-03	TRANSISTOR	DTC144ESA-TP			
Q932	8-729-029-56	TRANSISTOR	DTA144ESA			
Q933	8-729-021-82	TRANSISTOR	2SD2396K			
Q934	8-729-021-82	TRANSISTOR	2SD2396K			
		< RESISTOR >				
R301	1-249-417-11	CARBON	1K	5%	1/4W	
R302	1-249-417-11	CARBON	1K	5%	1/4W	
R303	1-249-417-11	CARBON	1K	5%	1/4W	
R304	1-249-417-11	CARBON	1K	5%	1/4W	
R305	1-249-415-11	CARBON	680	5%	1/4W	
R307	1-249-417-11	CARBON	1K	5%	1/4W	
R308	1-249-429-11	CARBON	10K	5%	1/4W	
R317	1-249-441-11	CARBON	100K	5%	1/4W	
R321	1-247-815-91	CARBON	220	5%	1/4W	
R331	1-249-424-11	CARBON	3.9K	5%	1/4W	
R401	1-249-435-11	CARBON	33K	5%	1/4W	
R402	1-249-435-11	CARBON	33K	5%	1/4W	
R403	1-249-431-11	CARBON	15K	5%	1/4W	
R404	1-249-431-11	CARBON	15K	5%	1/4W	
R407	1-247-863-91	CARBON	22K	5%	1/4W	
R408	1-247-863-91	CARBON	22K	5%	1/4W	
R409	1-247-830-11	CARBON	910	5%	1/4W	
R410	1-249-420-11	CARBON	1.8K	5%	1/4W	
R411	1-247-891-00	CARBON	330K	5%	1/4W	
R412	1-247-815-91	CARBON	220	5%	1/4W	(AEP,G)
R412	1-249-414-11	CARBON	560	5%	1/4W	(UK)
R413	1-247-815-91	CARBON	220	5%	1/4W	(AEP,G)
R414	1-249-393-11	CARBON	10	5%	1/4W	(AEP,G)
R415	1-247-815-91	CARBON	220	5%	1/4W	(AEP,G)
R415	1-247-807-31	CARBON	100	5%	1/4W	(UK)
R418	1-249-441-11	CARBON	100K	5%	1/4W	(AEP,G)
R419	1-249-425-11	CARBON	4.7K	5%	1/4W	(UK)
R420	1-247-826-00	CARBON	620	5%	1/4W	
R451	1-249-435-11	CARBON	33K	5%	1/4W	(AEP,G)
R452	1-249-435-11	CARBON	33K	5%	1/4W	(AEP,G)
R453	1-249-435-11	CARBON	33K	5%	1/4W	(AEP,G)
R454	1-249-435-11	CARBON	33K	5%	1/4W	(AEP,G)
R455	1-249-403-11	CARBON	68	5%	1/4W	(AEP,G)
R501	1-249-435-11	CARBON	33K	5%	1/4W	
R502	1-249-435-11	CARBON	33K	5%	1/4W	
R503	1-249-431-11	CARBON	15K	5%	1/4W	
R504	1-249-431-11	CARBON	15K	5%	1/4W	
R507	1-247-863-91	CARBON	22K	5%	1/4W	
R508	1-247-863-91	CARBON	22K	5%	1/4W	
R509	1-247-830-11	CARBON	910	5%	1/4W	
R510	1-249-420-11	CARBON	1.8K	5%	1/4W	
R511	1-247-891-00	CARBON	330K	5%	1/4W	
R512	1-247-815-91	CARBON	220	5%	1/4W	(AEP,G)
R512	1-249-414-11	CARBON	560	5%	1/4W	(UK)
R513	1-247-815-91	CARBON	220	5%	1/4W	(AEP,G)
R514	1-249-393-11	CARBON	10	5%	1/4W	(AEP,G)
R515	1-247-815-91	CARBON	220	5%	1/4W	(AEP,G)
R515	1-247-807-31	CARBON	100	5%	1/4W	(UK)
R518	1-249-441-11	CARBON	100K	5%	1/4W	(AEP,G)
R519	1-249-425-11	CARBON	4.7K	5%	1/4W	(UK)
R520	1-247-826-00	CARBON	620	5%	1/4W	
R541	1-249-435-11	CARBON	33K	5%	1/4W	(AEP,G)
R542	1-249-435-11	CARBON	33K	5%	1/4W	(AEP,G)
R543	1-249-435-11	CARBON	33K	5%	1/4W	(AEP,G)
R544	1-249-435-11	CARBON	33K	5%	1/4W	(AEP,G)
R545	1-249-403-11	CARBON	68	5%	1/4W	(AEP,G)
R910	1-249-390-11	CARBON	5.6	5%	1/4W	
R911	1-249-390-11	CARBON	5.6	5%	1/4W	
R912	1-249-423-11	CARBON	3.3K	5%	1/4W	
R913	1-249-423-11	CARBON	3.3K	5%	1/4W	
R915	1-249-429-11	CARBON	10K	5%	1/4W	
R916	1-249-438-11	CARBON	56K	5%	1/4W	
R917	1-247-863-91	CARBON	22K	5%	1/4W	
R920	1-249-436-11	CARBON	39K	5%	1/4W	
R921	1-249-431-11	CARBON	15K	5%	1/4W	
R922	1-249-423-11	CARBON	3.3K	5%	1/4W	
R923	1-249-429-11	CARBON	10K	5%	1/4W	
R930	1-249-411-11	CARBON	330	5%	1/4W	
R931	1-249-421-11	CARBON	2.2K	5%	1/4W	

MAIN **POWER** **SLED** **SPINDLE**

Ref. No.	Part No.	Description			Remark
R932	1-249-436-11	CARBON	39K	5%	1/4W
R933	1-247-807-31	CARBON	100	5%	1/4W
R934	1-249-421-11	CARBON	2.2K	5%	1/4W
R935	1-249-422-11	CARBON	2.7K	5%	1/4W
R937	1-249-417-11	CARBON	1K	5%	1/4W
R938	1-247-807-31	CARBON	100	5%	1/4W
R939	1-249-425-11	CARBON	4.7K	5%	1/4W
R940	1-249-423-11	CARBON	3.3K	5%	1/4W
R941	1-249-428-11	CARBON	8.2K	5%	1/4W
R942	1-249-425-11	CARBON	4.7K	5%	1/4W
R943	1-249-425-11	CARBON	4.7K	5%	1/4W
R950	1-247-807-31	CARBON	100	5%	1/4W
		< VIBRATOR >			
X301	1-579-834-11	VIBRATOR, CRYSTAL (33.8688MHz)			
**********					
*	1-658-819-11	POWER BOARD			
		**********			
*	4-962-200-01	PLATE (TR), GROUND			
		< CAPACITOR >			
C901	1-164-159-21	CERAMIC	0.1uF		50V
C902	1-164-159-21	CERAMIC	0.1uF		50V
C903	1-164-159-21	CERAMIC	0.1uF		50V
C904	1-164-159-21	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN901	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
**********					
*	1-658-709-11	SLED BOARD			
		**********			
		< CONNECTOR >			
CN104	1-774-380-11	CONNECTOR, FFC/FPC 16P			
CN105	1-568-838-11	SOCKET, CONNECTOR 21P			
* CN106	1-750-737-11	CONNECTOR, FFC/FPC 5P			
**********					
*	1-658-708-11	SPINDLE BOARD			
		**********			
		< CONNECTOR >			
* CN107	1-568-848-11	SOCKET, CONNECTOR 5P			
		< SWITCH >			
S151	1-571-958-11	SWITCH, PUSH (1 KEY)(LIMIT SW)			
**********					

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
55	1-776-235-11	WIRE (FLAT TYPE) (23 CORE)	
101	1-452-820-11	MAGNET (ASSY)	
105	1-776-998-11	WIRE (FLAT TYPE) (21 CORE)	
157	1-775-990-11	WIRE (FLAT TYPE) (5 CORE)	
⚠160	8-848-376-01	OPTICAL PICK-UP KSS-213B/S-N	
161	1-775-991-11	WIRE (FLAT TYPE) (16 CORE)	
M101	X-4947-304-1	MOTOR ASSY (SPINDLE)	
M102	X-4947-303-1	MOTOR ASSY (SLED)	
M151	A-4660-968-A	MOTOR ASSY (LOADING)	
⚠CNP901	1-575-651-21	CORD, POWER (AEP,G)	
⚠CNP901	1-696-907-11	CORD, POWER (UK)	
⚠T901	1-429-367-11	TRANSFORMER, POWER	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-473-125-11	REMOTE COMMANDER (RM-D820)	
	1-558-271-11	CORD, CONNECTION (AUDIO 108cm)(AEP,G)	
	1-590-925-31	CORD, CONNECTION (AUDIO 100cm)(UK)	
	3-810-116-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,SWEDISH)(AEP,UK)	
	3-810-116-21	MANUAL, INSTRUCTION (GERMAN,DUTCH,ITALIAN,PORTUGUESE)(AEP)	
	3-810-116-31	MANUAL, INSTRUCTION (GERMAN)(G)	
	4-962-615-01	COVER, BATTERY (for RM-D820)	
*	4-979-127-01	INDIVIDUAL CARTON (AEP,G)	
*	4-979-127-11	INDIVIDUAL CARTON (UK)	
*	4-982-101-01	CUSHION	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
#3	7-682-548-04	SCREW +BVTT 3X8 (S)	
#4	7-627-852-07	SCREW, PRECISION +P 1.7X2.5	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-960-633-11

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

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